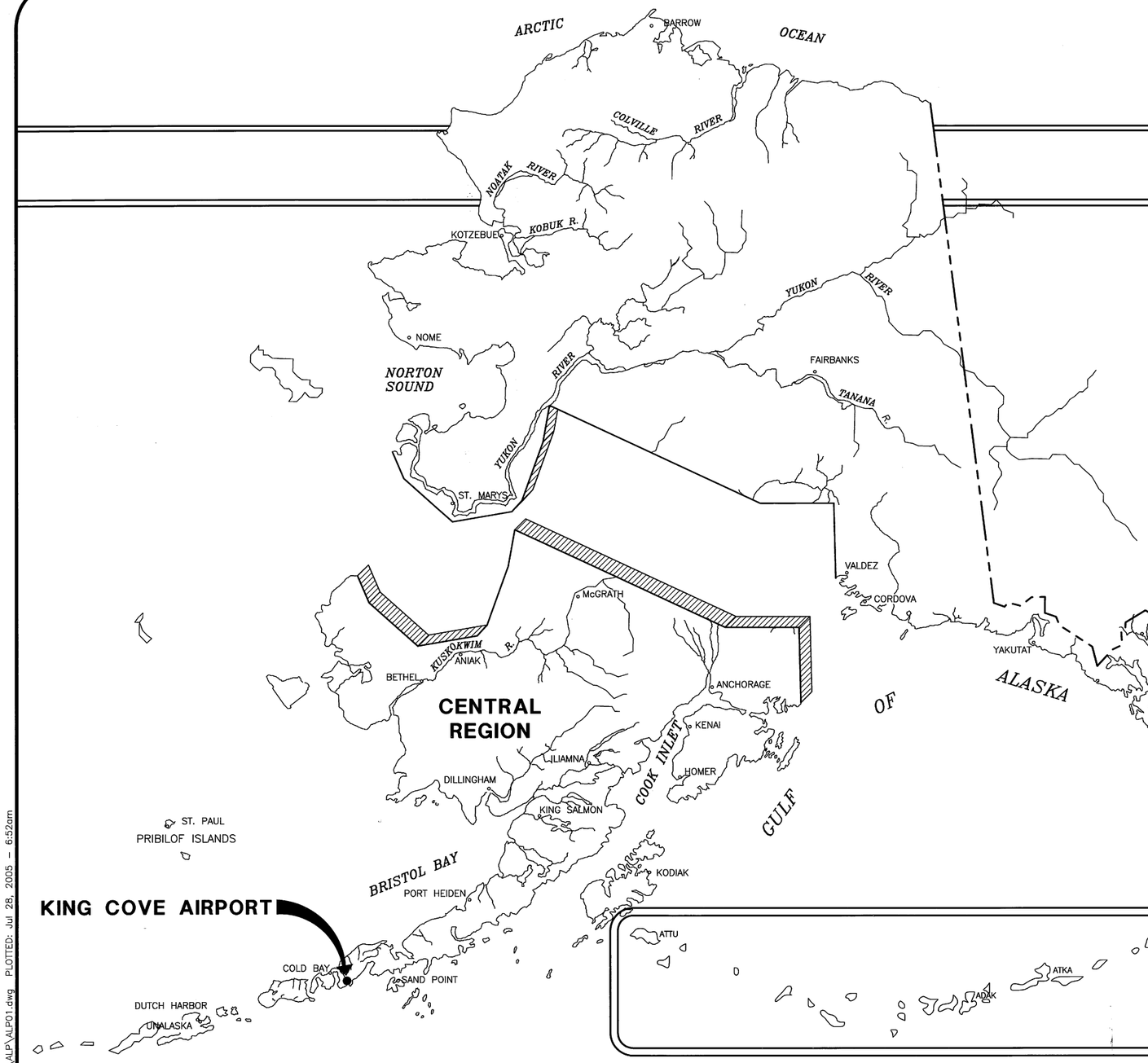
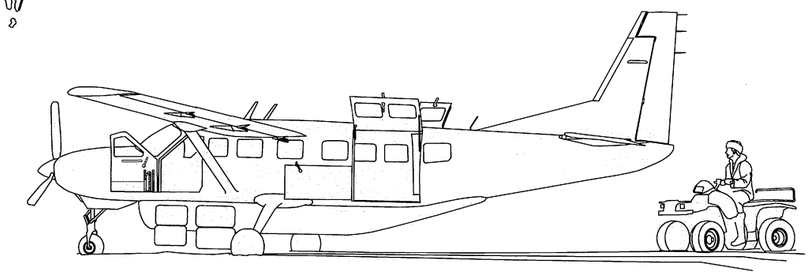


AIRPORT LAYOUT PLAN FOR

KING COVE AIRPORT (KVC)

2005

DRAWING INDEX



SPONSORED BY
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

CONCUR Steven R. Horn **DATE** 7/29/05
STEVEN R. HORN, P.E. CONSTRUCTION & OPERATIONS DIRECTOR

APPROVED RAJ Wilson FOR **DATE** 7.29.5
ROBERT A. CAMPBELL, P.E. REGIONAL PRECONSTRUCTION ENGINEER

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 8/11/05

By: _____ Date: 8/11/05
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-601

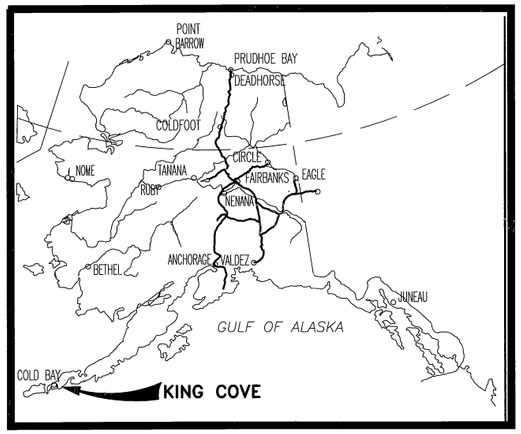
FAA AIRSPACE REVIEW NUMBER
2004-AAL-166-NRA

KING COVE
AIRPORT LAYOUT PLAN
COVER SHEET AND INDEX

SHEET 1 OF 10

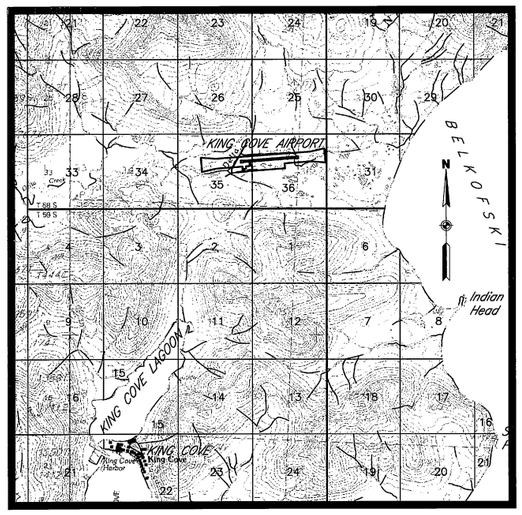
File: i:\764000\\ALP\ALP01.dwg Date of Last Revision: JULY 2005

DRAWING NAME: I:\764000\Dwgs\C\ALP\ALP01.dwg PLOTTED: Jul 28, 2005 – 6:52am



LOCATION MAP

NO SCALE

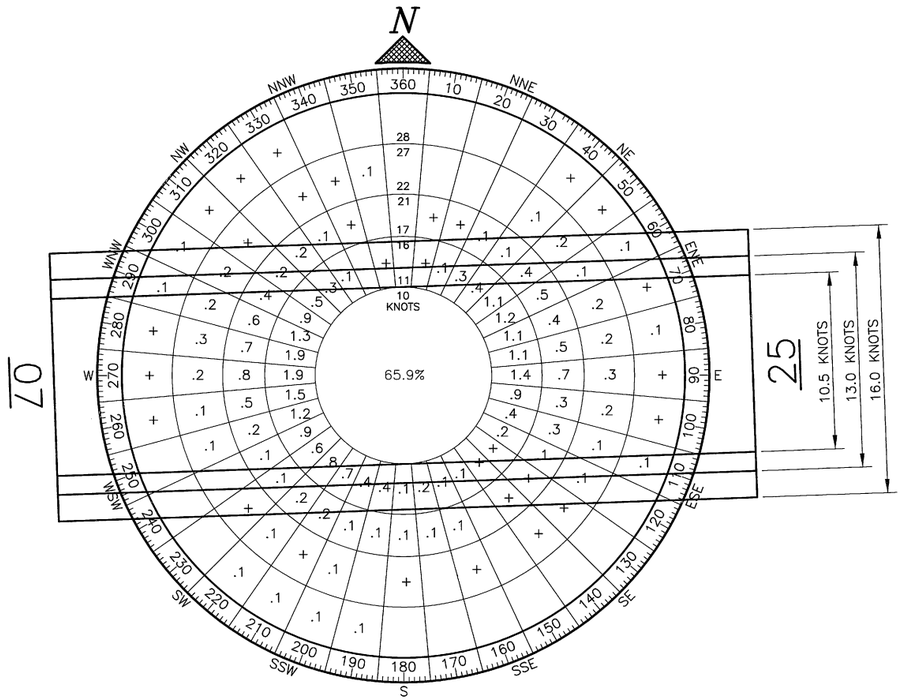


VICINITY MAP

SCALE: 1"=1 MILE

T59S, R86W, SEWARD MERDIAN

USGS COLD BAY A-1 1943



WIND ROSE

WIND DATA

CROSSWIND COMPONENT	WIND COVERAGE	AIRPORT REFERENCE CODE
10.5 KNOTS	92.94%	A-I & B-I
13.0 KNOTS	96.02%	A-II & B-II
16.0 KNOTS	98.09%	A-III, B-III, & C-I THROUGH D-III

WIND DATA PERIOD: MAY 1999 - MAY 2000
NOTE: NO DATA FOR NOVEMBER AND DECEMBER 1999
SOURCE: DRYDEN INSTRUMENTATION

NON-STANDARD CONDITIONS

ITEM	EXISTING	STANDARD	ULTIMATE
RUNWAY SAFETY AREA WIDTH	120'	150'	150'
TAXIWAY SAFETY AREA WIDTH	70'	79'	118'
RUNWAY SAFETY AREA LENGTH	3980'	4100'	4100'

NOTES

1. NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS.
2. EXISTING OBJECTS OBSTRUCTING THE OFZ WILL BE REMOVED IN THE ULTIMATE CONFIGURATION.

DATA TABLES

RUNWAY DATA

ITEM			RUNWAY 07-25 EXISTING	RUNWAY 07-25 ULTIMATE
FAR PART 77 CATEGORY			UTILITY-V	UTILITY-NPI
RUNWAY SURFACE			GRAVEL	SAME
PAVEMENT STRENGTH	SINGLE WHEEL (S)	kg	N/A	N/A
		(lb.)	N/A	N/A
	DUAL WHEEL (D)	kg	N/A	N/A
		(lb.)	N/A	N/A
	DUAL TANDEM (DT)	kg	N/A	N/A
		(lb.)	N/A	N/A
RUNWAY TOUCHDOWN ZONE ELEVATION	RUNWAY 07		142.8'	145.2'
	RUNWAY 25		142.8'	145.2'
EFFECTIVE GRADE			-0.052%	-0.054%
APPROACH SLOPE	RUNWAY 07		20:1	SAME
	RUNWAY 25		20:1	34:1
APPROACH VISIBILITY MINIMUMS	RUNWAY 07		>1 SM	SAME
	RUNWAY 25		>1 SM	SAME
RUNWAY MARKING			NONE	SAME
RUNWAY LIGHTING			NONE	MIRL
NAVIGATION APPROACH AIDS			NONE	PAPI, REIL, GPS
RUNWAY DIMENSION			3500' X 115'	3500' X 100'
RUNWAY SAFETY AREA (RSA)				
- WIDTH			120'	150'
- LENGTH BEYOND RUNWAY END	RUNWAY 07		240'	300'
	RUNWAY 25		240'	300'
RUNWAY OBJECT FREE AREA (ROFA)				
- WIDTH			500'	SAME
- LENGTH BEYOND RUNWAY END	RUNWAY 07		240'	300'
	RUNWAY 25		240'	300'
RUNWAY OBSTACLE FREE ZONE (ROFZ)				
- WIDTH			250'	400'
- LENGTH BEYOND RUNWAY END			200'	SAME
RUNWAY PROTECTION ZONE (RPZ)			1000'x250'x450'	1700'x500'x1010'
GEODETIC POSITIONS (NAD83)*				
THRESHOLD 7 (EXISTING) STA. 50+60.00		LAT.	55°06'58.30"N	N/A
		LONG.	162°16'28.56"W	N/A
(ULTIMATE) STA. 50+00.00		LAT.	N/A	55°06'58.43"N
		LONG.	N/A	162°16'29.60"W
THRESHOLD 25 (EXISTING) STA. 85+60.00		LAT.	55°06'59.41"N	N/A
		LONG.	162°15'28.41"W	N/A
(ULTIMATE) STA. 85+00.00		LAT.	N/A	55°06'59.54"N
		LONG.	N/A	162°15'29.45"W

AIRPORT DATA

ITEM		EXISTING	ULTIMATE
AIRPORT IDENTIFIER ICAO/U.S.		KVC	SAME
AIRPORT ELEVATION (NAVD88)**		143'	146'
AIRPORT REFERENCE POINT (ARP) - NAD83*	LAT.	55°06'58.85"N	55°06'58.98"N
ULTIMATE STA. 67+50.00	LONG.	162°15'58.49"W	162°15'59.53"W
MEAN MAX. TEMPERATURE, HOTTEST MONTH (AUGUST)		56.2°F (COLD BAY)	N/A
AIRPORT AND TERMINAL NAVIGATION AIDS		NONE	BEACON, AWOS
AIRPORT REFERENCE CODE (ARC)		B-II	SAME
TAXIWAY LIGHTING		NONE	MITL
MAGNETIC DECLINATION, JAN. 2005		13°46'E	N/A

*CALCULATED BASED ON EXISTING RUNWAY CENTERLINE MONUMENTS CONVERTED FROM THE U.S. FOOT LOCAL SURFACE GRID. BASIS OF COORDINATES ARE EXISTING NAD83 NGS CORS STATIONS.

**GPS DERIVED NAVD88 ORTHOMETRIC HEIGHTS BASED ON NAD83 ELLIPSOID HEIGHTS AT EXISTING NGS CORS STATIONS.

LEGEND

ITEM	EXISTING	ULTIMATE
AIRPORT REFERENCE POINT (ARP)		
BUILDINGS		
BUILDING RESTRICTION LINE	BRL	BRL
CONTOURS	100	SAME
FENCING	N/A	
LEASE LOT LINE		
PROPERTY LINE		
REIL	N/A	
ROADWAYS/EMBANKMENTS		
ROTATING BEACON	N/A	
RUNWAY SAFETY AREA		
SECURITY GATE	N/A	G
SHORELINE		
THRESHOLD LIGHTS	N/A	
PAPI	N/A	
WIND CONE		SAME
SEGMENTED CIRCLE	N/A	
TREE/BRUSH LINE		SAME

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL

By: _____
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-601

DATE: 8/15/05

FAA AIRSPACE REVIEW NUMBER: 2004-AAL-166-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____
HARVEY M. DOUTHIT, P.E. DESIGN SECTION CHIEF

APPROVED: Morgan P. Merritt
MORGAN P. MERRITT, P.E. PROJECT MANAGER

DATE JULY 2005
DESIGN EJG/JGL
DRAWN SMT
CHECKED ZWS

KING COVE AIRPORT

VICINITY MAP, WINDROSE AND DATA TABLES

SHEET 2 OF 10

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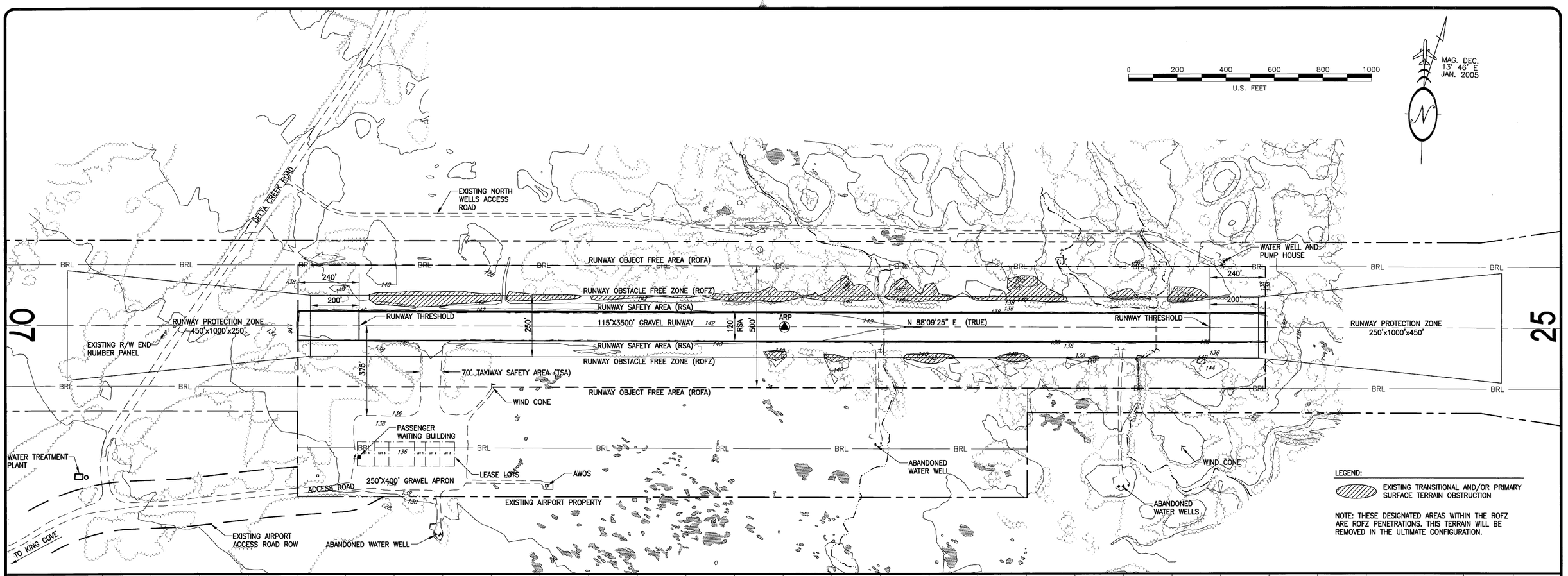

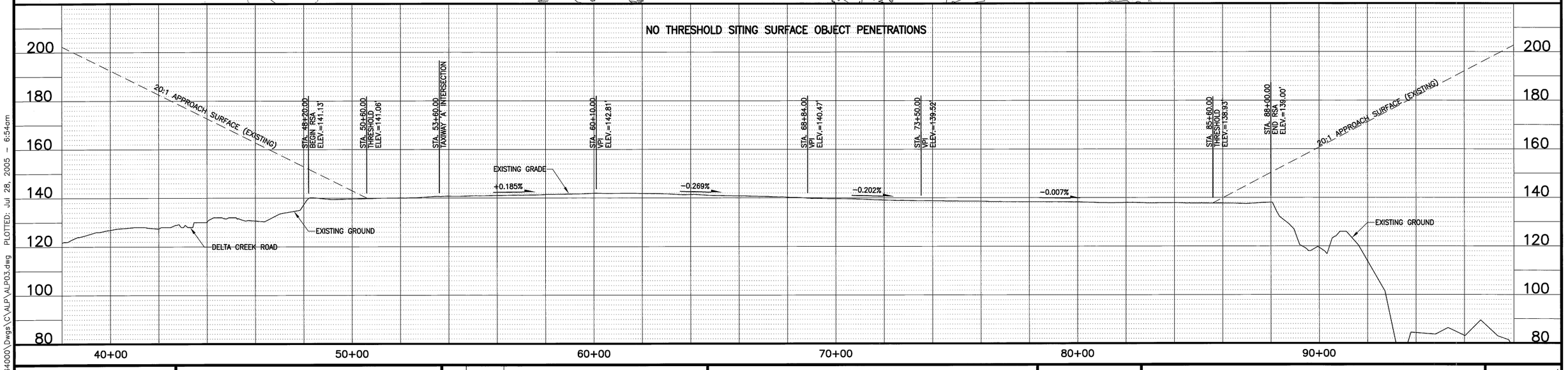

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ALASKAN REGION, AAL-601

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DATE JULY 2005
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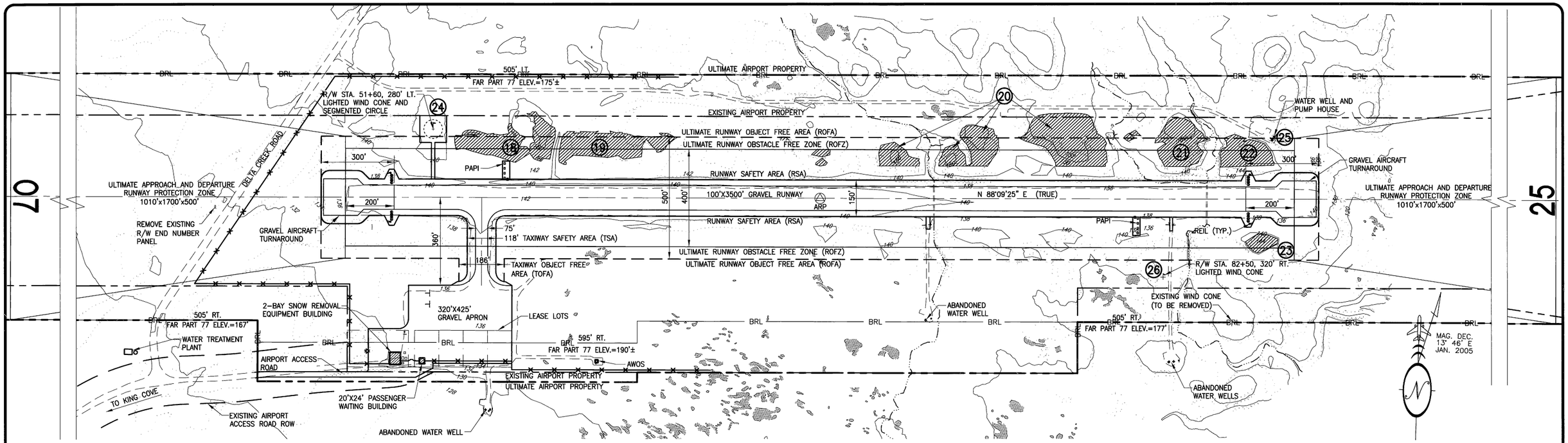
CHECKED ZWS

KING COVE AIRPORT

EXISTING AIRPORT LAYOUT PLAN
AIRPORT PLAN AND RUNWAY PROFILE

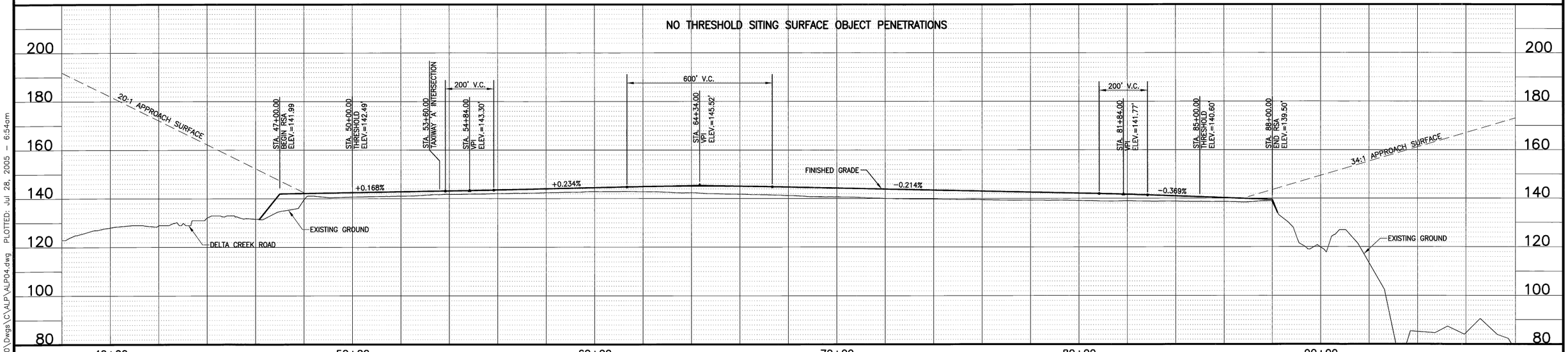
SHEET 3 OF 10



NOTE:
THE ULTIMATE RUNWAY CENTERLINE IS OFFSET 15' NORTH OF THE EXISTING RUNWAY CENTERLINE.

LEGEND:

(20) TRANSITIONAL AND/OR PRIMARY SURFACE TERRAIN OBSTRUCTION. SEE TABLE, SHEET 7, FOR OBSTRUCTION DATA AND DISPOSITION. THESE DESIGNATED AREAS WITHIN THE ROFZ ARE ROFZ PENETRATIONS. THIS TERRAIN WILL BE REMOVED IN THE ULTIMATE CONFIGURATION.



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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL

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ALASKAN REGION, AAL-601

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DATE JULY 2005
DESIGN EJG/JGL
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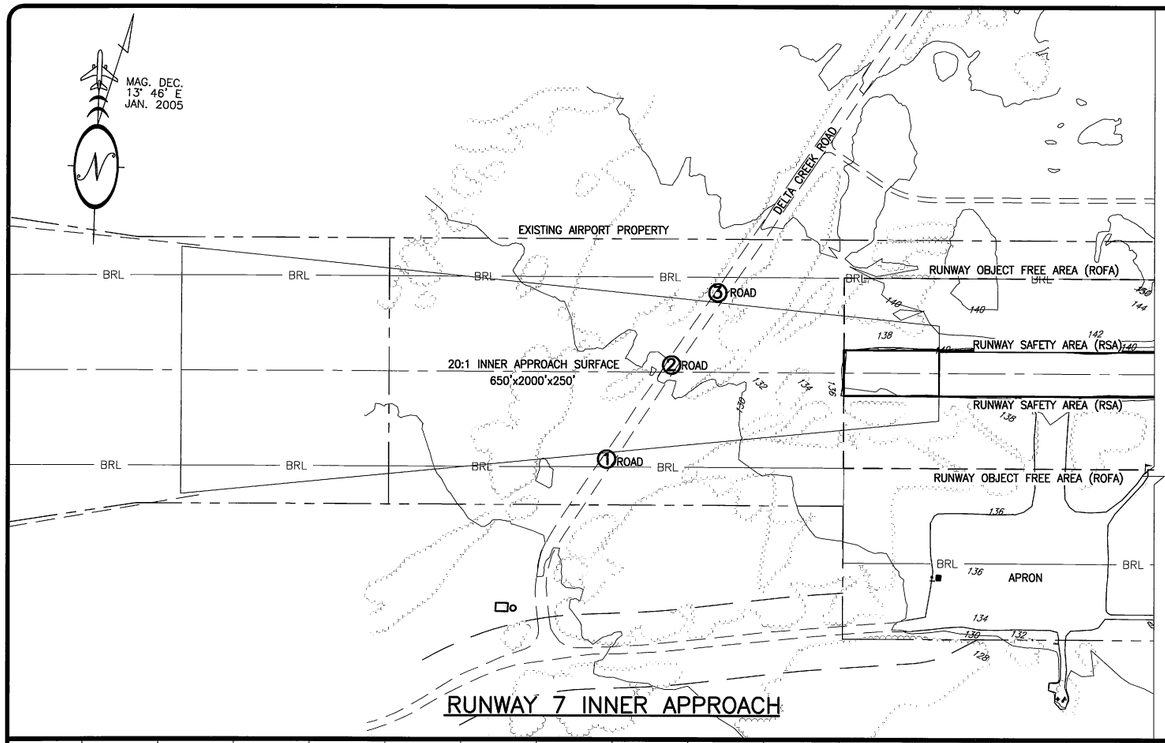
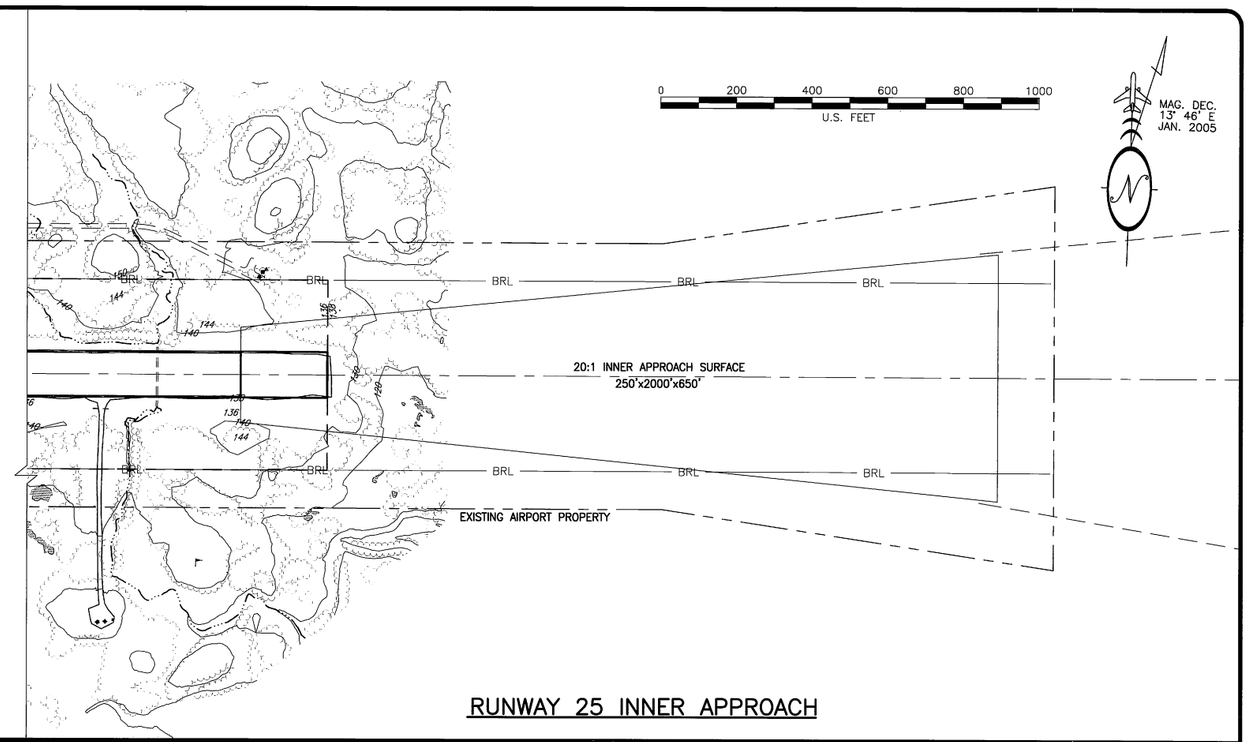
KING COVE AIRPORT

ULTIMATE AIRPORT LAYOUT PLAN
AIRPORT PLAN AND RUNWAY PROFILE

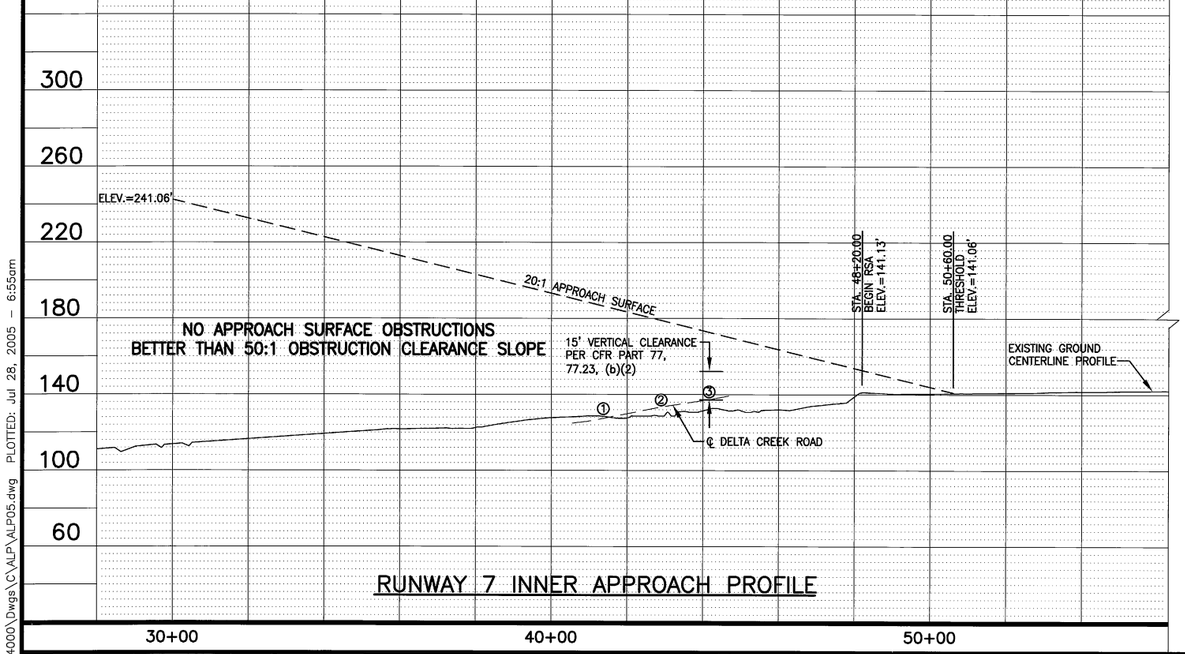
SHEET 4 OF 10



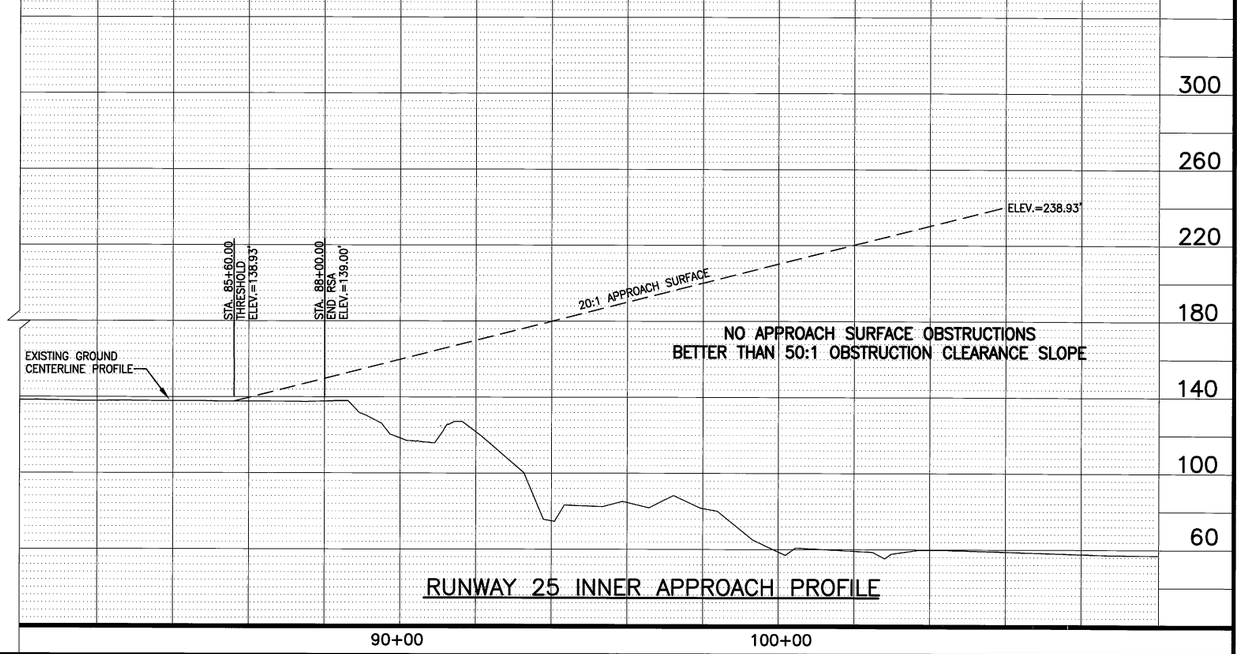
RUNWAY 7 INNER APPROACH



RUNWAY 25 INNER APPROACH



RUNWAY 7 INNER APPROACH PROFILE



RUNWAY 25 INNER APPROACH PROFILE

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ALASKAN REGION, AAL-601

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DATE JULY 2005
DESIGN EJG/JGL
DRAWN SMT
CHECKED ZWS

KING COVE AIRPORT

EXISTING INNER PORTION OF THE APPROACH SURFACE DRAWING

SHEET 5 OF 10

FILE: 764000\ALP05.dwg

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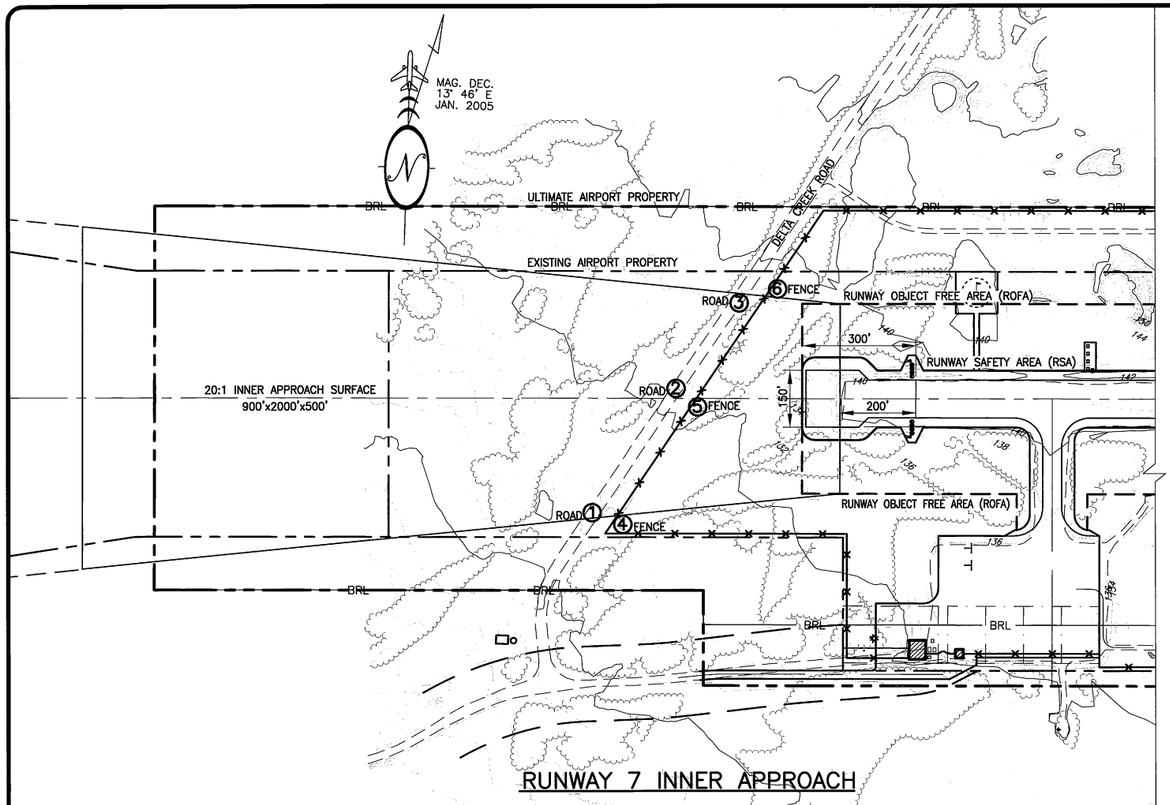
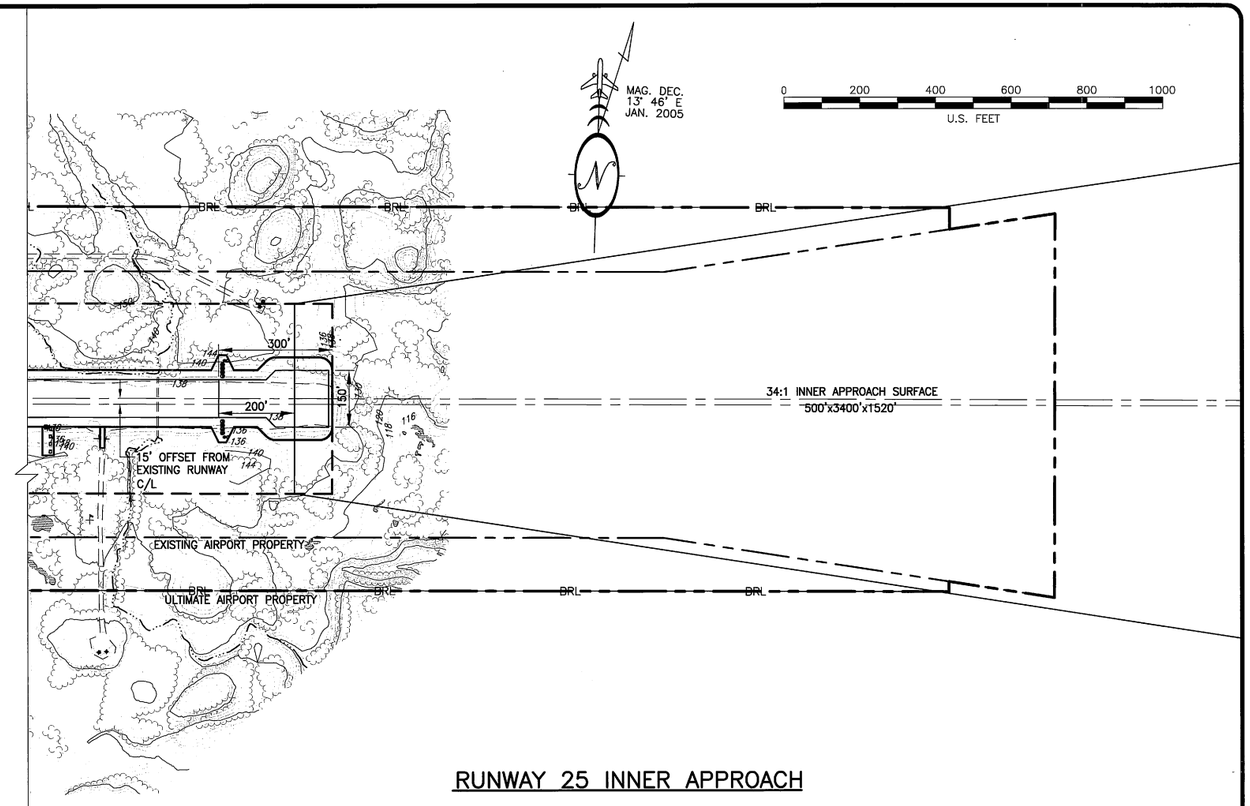
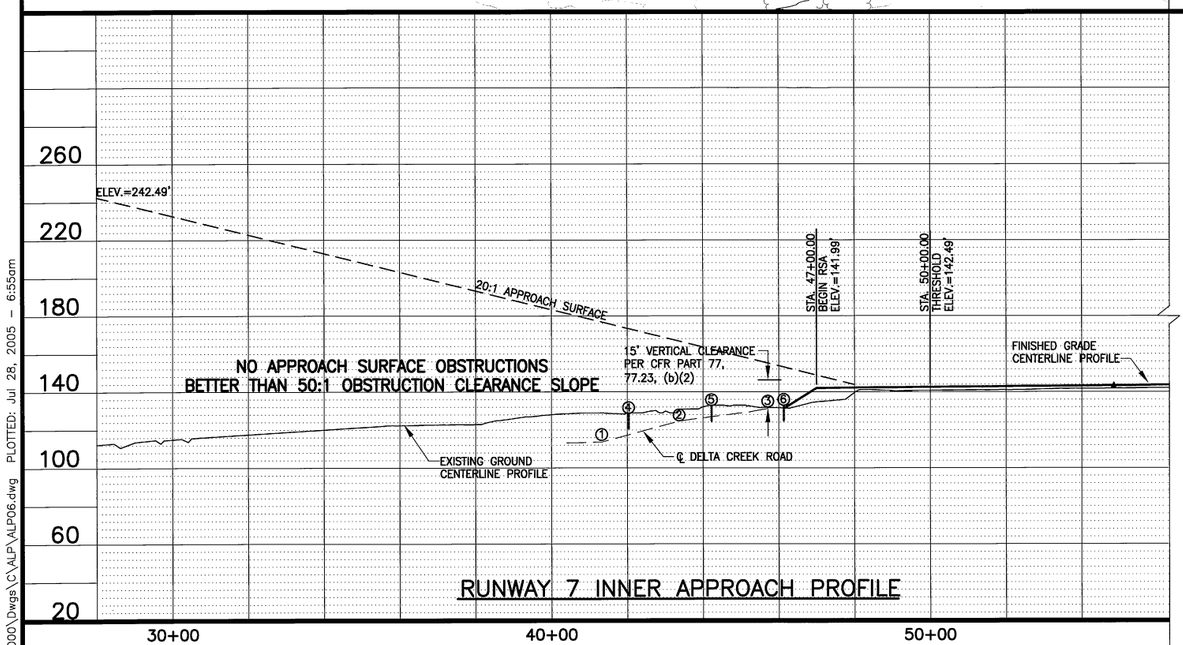


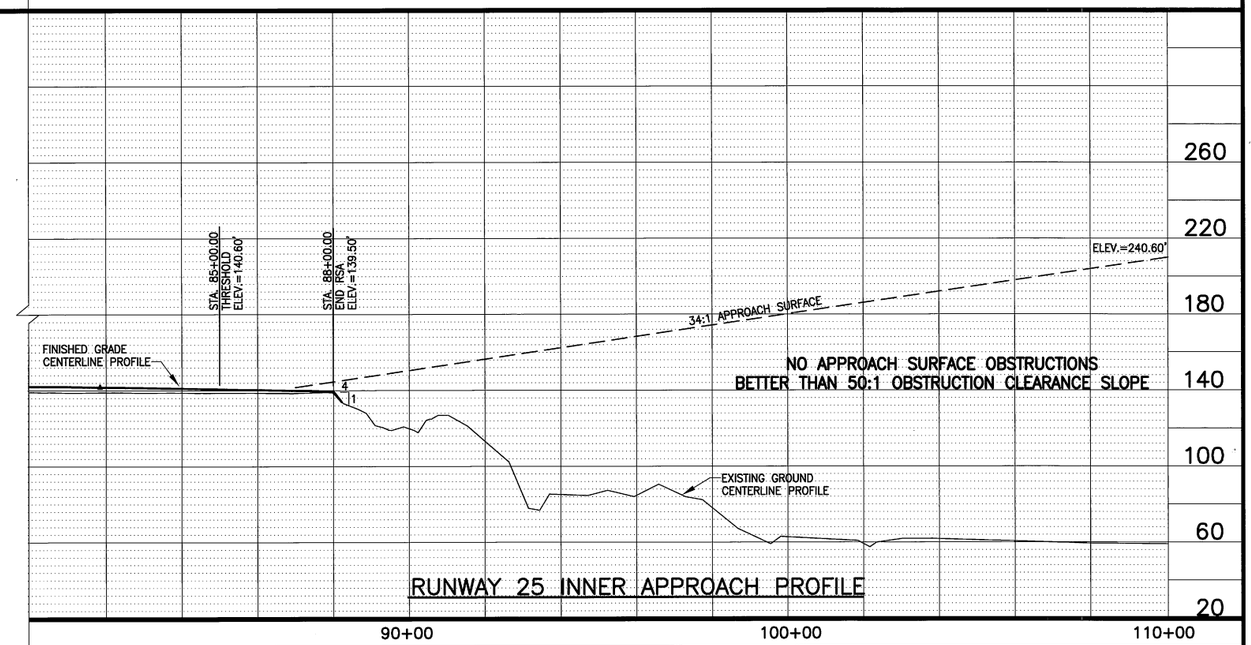
RUNWAY 7 INNER APPROACH



RUNWAY 25 INNER APPROACH



RUNWAY 7 INNER APPROACH PROFILE



RUNWAY 25 INNER APPROACH PROFILE

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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL

By: _____
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-601

DATE: 6/15/05

FAA AIRSPACE REVIEW NUMBER: 2004-AAL-166-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____
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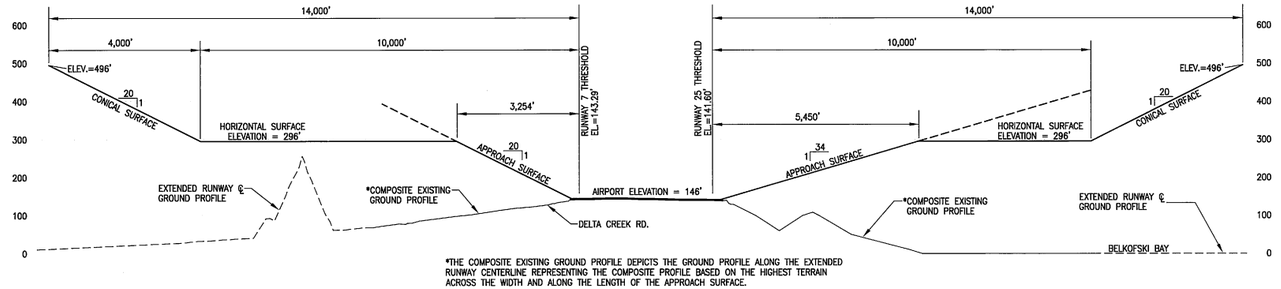
MORGAN P. MERRITT, P.E. — PROJECT MANAGER

DATE JULY 2005
DESIGN EJG/JGL
DRAWN SMT
CHECKED ZWS

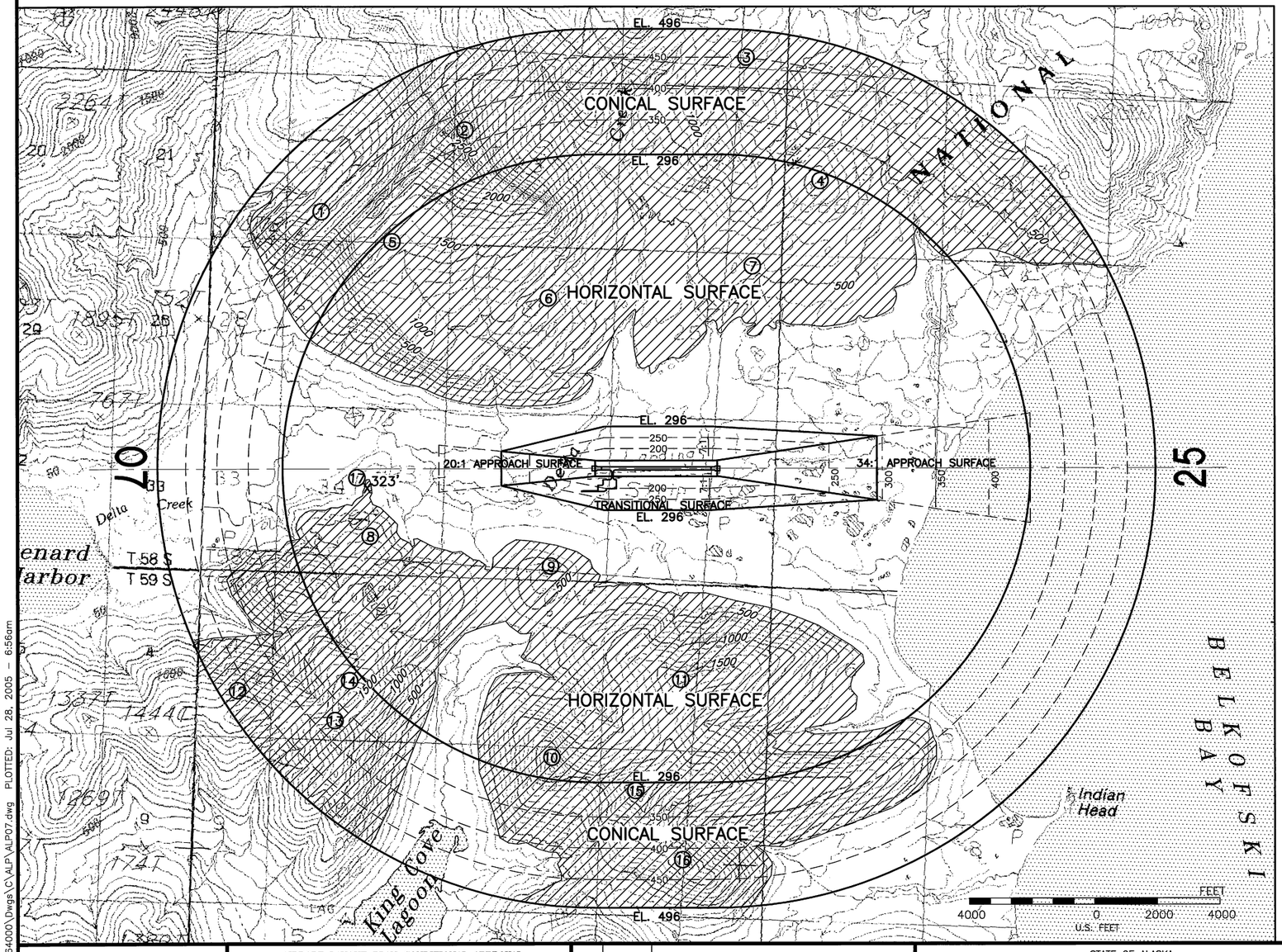
KING COVE AIRPORT

ULTIMATE INNER PORTION OF THE APPROACH SURFACE DRAWING

SHEET 6 OF 10



*THE COMPOSITE EXISTING GROUND PROFILE DEPICTS THE GROUND PROFILE ALONG THE EXTENDED RUNWAY CENTERLINE REPRESENTING THE COMPOSITE PROFILE BASED ON THE HIGHEST TERRAIN ACROSS THE WIDTH AND ALONG THE LENGTH OF THE APPROACH SURFACE.



MAG. DEC.
13° 46' E
JAN. 2005

LEGEND

HORIZONTAL OR CONICAL SURFACE OBSTRUCTION

WATER SURFACE

NOTE:
SEE SHEET 4 FOR CLOSE-IN PRIMARY, TRANSITIONAL, AND/OR APPROACH SURFACES OBSTRUCTIONS.

OBSTRUCTION DATA TABLE

	NUMBER	PENETRATION DISTANCE	DESCRIPTION	DISPOSITION
THIS SHEET	①	980'	TERRAIN PENETRATION / CON. SFC.	TO REMAIN
	②	2641'	TERRAIN PENETRATION / CON. SFC.	TO REMAIN
	③	850'	TERRAIN PENETRATION / CON. SFC.	TO REMAIN
	④	771'	TERRAIN PENETRATION / HOR. SFC.	TO REMAIN
	⑤	1405'	TERRAIN PENETRATION / HOR. SFC.	TO REMAIN
	⑥	745'	TERRAIN PENETRATION / HOR. SFC.	TO REMAIN
	⑦	305'	TERRAIN PENETRATION / HOR. SFC.	TO REMAIN
	⑧	505'	TERRAIN PENETRATION / HOR. SFC.	TO REMAIN
	⑨	409'	TERRAIN PENETRATION / HOR. SFC.	TO REMAIN
	⑩	1560'	TERRAIN PENETRATION / HOR. SFC.	TO REMAIN
	⑪	1415'	TERRAIN PENETRATION / HOR. SFC.	TO REMAIN
	⑫	1245'	TERRAIN PENETRATION / CON. SFC.	TO REMAIN
	⑬	1530'	TERRAIN PENETRATION / CON. SFC.	TO REMAIN
	⑭	1500'	TERRAIN PENETRATION / CON. SFC.	TO REMAIN
	⑮	1900'	TERRAIN PENETRATION / CON. SFC.	TO REMAIN
	⑯	1280'	TERRAIN PENETRATION / CON. SFC.	TO REMAIN
	⑰	28'	TERRAIN PENETRATION / HOR. SFC.	TO REMAIN
SEE SHEET 4	⑱	10'±	TERR. PEN. / PRIM. & TRANS. SURFACE	TO BE REMOVED
	⑲	9'±	TERR. PEN. / PRIM. & TRANS. SURFACE	TO BE REMOVED
	⑳	10'±	TERR. PEN. / PRIM. & TRANS. SURFACE	TO BE REMOVED
	㉑	7'±	TERR. PEN. / PRIM. & TRANS. SURFACE	TO BE REMOVED
	㉒	4'±	TERR. PEN. / PRIM. & TRANS. SURFACE	TO BE REMOVED
	㉓	3'±	TERR. PEN. / PRIMARY SURFACE	TO BE REMOVED
	㉔	10'	WIND CONE / TRANS. SFC.	OBSTRUCTION LIGHT
	㉕	1'±	BUILDING PENETRATION / TRANS. SFC.	OBSTRUCTION LIGHT
	㉖	5'	WIND CONE / TRANS. SFC.	OBSTRUCTION LIGHT

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FILE: 764000\ALP07.dwg

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL

By: _____
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-601

DATE: 8/17/05

FAA AIRSPACE REVIEW NUMBER: 2004-AAL-166-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____ DESIGN SECTION CHIEF
HARVEY M. DOUTHIT, P.E.

APPROVED: Morgan P. Merritt PROJECT MANAGER
MORGAN P. MERRITT, P.E.

DATE JULY 2005
DESIGN EJG/JGL
DRAWN SMT
CHECKED ZWS

KING COVE AIRPORT

AIRPORT AIRSPACE DRAWING
(ULTIMATE)

SHEET 7 OF 10

45+00 50+00 55+00 60+00

RUNWAY 7-25
N 88°09'25" E (TRUE)

RUNWAY SAFETY AREA (RSA)

RUNWAY OBJECT FREE AREA (ROFA)

TAXIWAY SAFETY AREA (TSA)

TAXIWAY OBJECT FREE AREA (TOFA)

TAXIWAY 'A'
N 01°55'35" W
(TRUE)

50'
118'
186'
360'

EXISTING WIND CONE
(TO BE REMOVED)

MAG. DEC.
13° 46' E
JAN. 2005

0 50 100 150 200 250
U.S. FEET

EXISTING AIRPORT BOUNDARY

20'
21'
70'
ULTIMATE G.A.
TIEDOWNS

EXISTING LEASE LOTS
TO BE ABANDONED

EXISTING 250'x400'
GRAVEL APRON

ULTIMATE 320'x425'
GRAVEL APRON

165'

40'R

REMOVE EXISTING
PASSENGER WAITING
BUILDING

LOT 4 LOT 5 LOT 1 LOT 2 LOT 3
25' 100' 100' 100' 100' 100'

ULTIMATE LEASE LOT APRON FRONTAGE

320'
50'
85'
15'
60'

595' RT.
FAR PART 77 ELEV.=190'±

595' RT.

144'

ROTATING
BEACON

ULTIMATE LEASE LOTS

AWOS

NEW SECURITY FENCE

EXISTING AIRPORT ACCESS ROAD

TO KING COVE

ULTIMATE AIRPORT ACCESS ROAD

APRON
ACCESS

ULTIMATE PASSENGER
WAITING BUILDING

EXISTING AIRPORT PROPERTY

ULTIMATE AIRPORT PROPERTY

ULTIMATE 2-BAY SNOW
REMOVAL EQUIPMENT
BUILDING

EXISTING AIRPORT
ACCESS ROAD ROW

ABANDONED WELL

LEGEND:
Ⓖ GATE

BUILDING DATA TABLE

NO.	STRUCTURE NAME	TOP ELEV.	OBSTRUCTION WARNING (Y/N)		REMARKS
			EXISTING	ULTIMATE	
①	SREB	178'*	N	N	NEW STRUCTURE
②	PASSENGER WAITING BLDG.	150'*	N	N	NEW STRUCTURE
③	ROTATING BEACON	166'*	N	Y	NEW STRUCTURE

*ESTIMATED

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL

By: _____
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-601

DATE: 8/15/05

FAA AIRSPACE REVIEW NUMBER: 2004-AAL-166-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____
HARVEY M. DOUTHIT, P.E. DESIGN SECTION CHIEF

APPROVED: _____
MORGAN P. MERRITT, P.E. PROJECT MANAGER

DATE JULY 2005
DESIGN EJG/JGL
DRAWN SMT
CHECKED ZWS

KING COVE AIRPORT

EXISTING/ULTIMATE TERMINAL AREA PLAN

SHEET 8 OF 10

DRAWING NAME: i:\764000\Dwgs\C\ALP\ALP08.dwg PLOTTED: Jul 28, 2005 - 6:56am

FILE: 764000\ALP08.dwg

HORIZONTAL CONTROL STATEMENT

Coordinate System:
This project is located entirely within a U.S. Foot local surface grid developed by USKH for this survey. The local projection parameters are a Transverse Mercator with an origin at NAD83(CORS96) (Epoch 2003.0) Position 55°06'58.84141 N, 162°15'59.16191" W, having a False Northing of 250000, False Easting of 350000, and representing the approximate midpoint of a proposed runway from October 2003, also being the Airport Reference Point (ARP–10/2003).

Basis of Coordinates:
The primary control for this survey was established using a Static GPS network, fully constrained within the NAD83(CORS96) (Epoch 2003.0) datum holding the NGS CORS Stations "Cold Bay 2 Antenna Reference Point (ARP)" (PID: AF9584) as 55°11'25.51117" N, 162°42'24.27956" W, "Kenai 1 ARP" (PID: AF9548) as 60°40'30.28414" N , 151°21'00.57054" W, and "Kodiak 1 ARP" (PID: AF9549) as 57°37'03.68967" N, 152°11'36.26407" W.

Basis of Bearings:
Local grid bearings are oriented to True North at the Local Coordinate System Origin being "ARP–10/2003" (N=250,000.00, E=350,000.00). This will be equivalent to the Mean NAD83(CORS96) (Epoch 2003.0) Geodetic Bearing of a runway centerline more or less centered on this point.

Translation Parameters:
CONVERSION FROM STATE PLANE, ZONE 7, NAD83 FEET TO LOCAL FEET :
1. SCALE STATE PLANE COORDINATES USING 1.0001026713
2. TRANSLATE RESULTING COORDINATES USING –157,804.5767 N –1,234,808.1168 E
3. ROTATE RESULTING COORDINATES AROUND "ARP–10/2003" (N=250,000.00, E=350,000.00) BY –00° 13' 06.8"

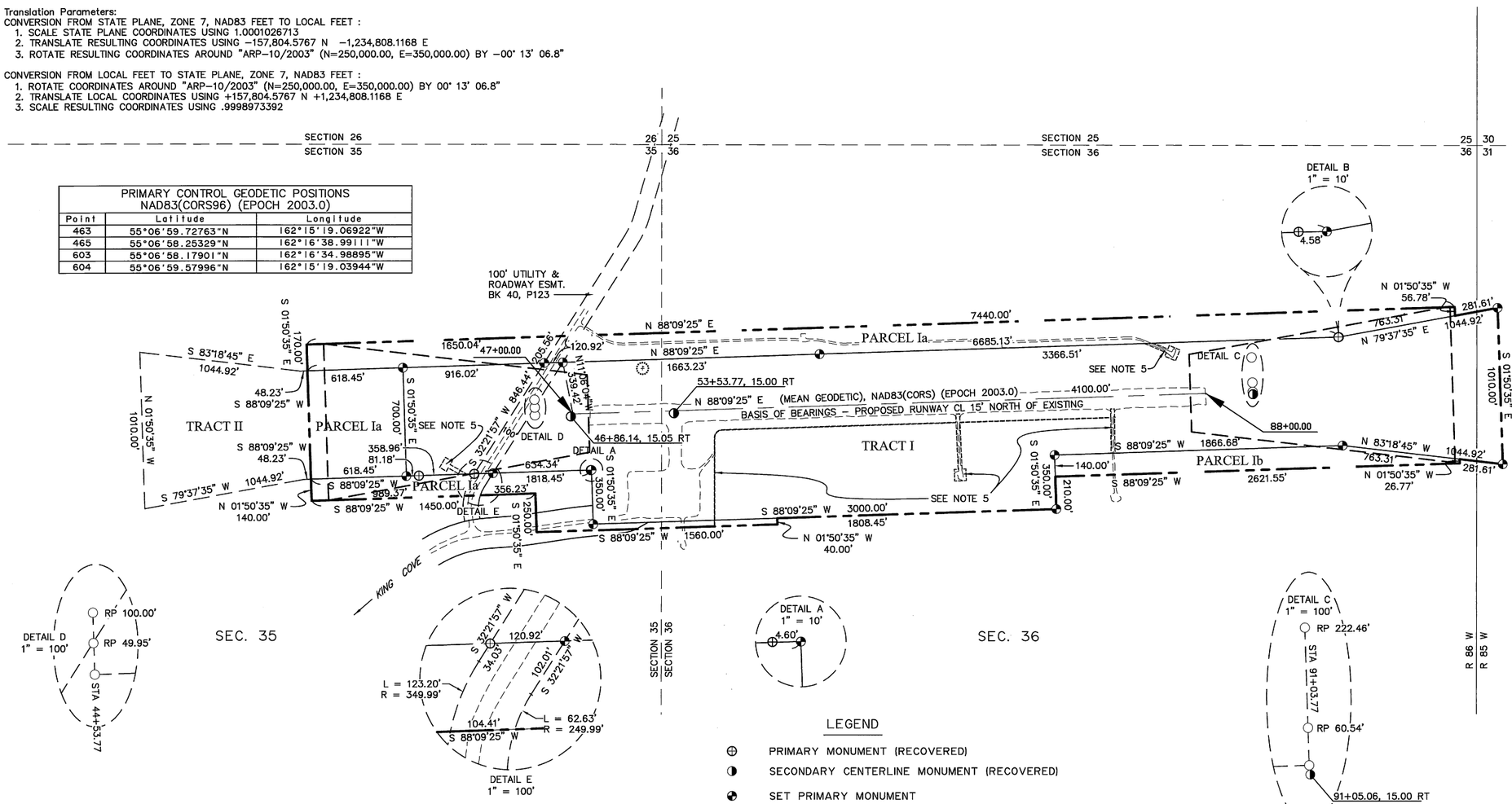
CONVERSION FROM LOCAL FEET TO STATE PLANE, ZONE 7, NAD83 FEET :
1. ROTATE COORDINATES AROUND "ARP–10/2003" (N=250,000.00, E=350,000.00) BY 00° 13' 06.8"
2. TRANSLATE LOCAL COORDINATES USING +157,804.5767 N +1,234,808.1168 E
3. SCALE RESULTING COORDINATES USING .9998973392

PROPERTY STATUS

PARCEL NO.	INTEREST TO BE ACQUIRED	GRANTOR	GRANTEE	LARGER PARCEL AREA	NET TAKE	REMAIN	RECORDED DOCUMENT NO.	ACQUIRED UNDER AIP NO.	DATE ACQUIRED
TRACT I	FEE	ALEUT CORP.	STATE OF ALASKA, DOT	LARGE	141.878 AC.	LARGE	BOOK 25 PAGE 894		3-21-82
TRACT II	AVIGATION ESMT.	ALEUT CORP.	STATE OF ALASKA, DOT	LARGE	21.058 AC.	LARGE	BOOK 25 PAGE 894		3-21-82
PARCEL Ia	FEE	ALEUT CORP.	STATE OF ALASKA, DOT	LARGE	43.044 AC.	LARGE			
PARCEL Ib	FEE	ALEUT CORP.	STATE OF ALASKA, DOT	LARGE	9.939 AC.	LARGE			

PRIMARY CONTROL GEODETIC POSITIONS
NAD83(CORS96) (EPOCH 2003.0)

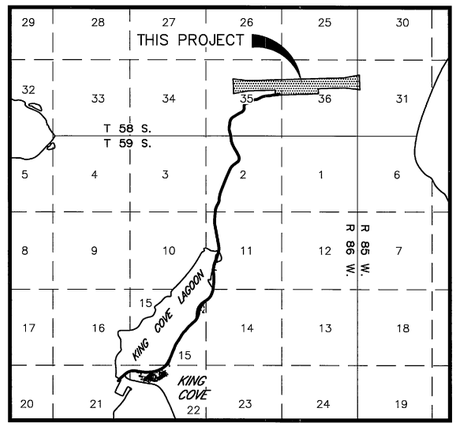
Point	Latitude	Longitude
463	55°06'59.72763"N	162°15'19.06922"W
465	55°06'58.25329"N	162°16'38.99111"W
603	55°06'58.17901"N	162°16'34.98895"W
604	55°06'59.57996"N	162°15'19.03944"W



LEGEND

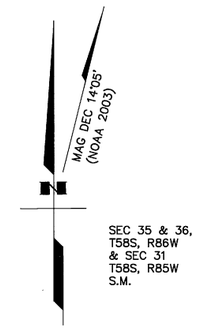
- PRIMARY MONUMENT (RECOVERED)
- SECONDARY CENTERLINE MONUMENT (RECOVERED)
- SET PRIMARY MONUMENT
- SET SECONDARY MONUMENT
- SURVEYED SECTION LINE
- UNSURVEYED SECTION LINE
- EXISTING PROPERTY BOUNDARY
- ULTIMATE PROPERTY BOUNDARY
- AVIGATION EASEMENT

0 200 400 800
Scale in Feet



VICINITY MAP

U.S.G.S. QUAD. COLD BAY A-I
SEC. 35 & 36, T58S, R86W & SEC 31
T58S, R85W SEWARD MERIDIAN
ALEUTIAN ISLANDS RECORDING DISTRICT
1" = 1 MILE



NOTES

1) The minimum closure of all traverses meets or exceeds 1:10,000.

2) The field survey was completed in August 2003, by USKH Inc.

3) See STP–BRO–0001(87), King Cove Lagoon Bridge Replacement/Airport Access Road for additional ROW information.

4) USKH recovered 3 secondary centerline monuments on the existing runway at 46+86.14/15.05' RT, 53+53.77/15.00' RT, and 91+05.06/15.00' RT.

5) Approximate dimensions of Easement Permit No. ADA–07378, being a water pipeline/utility corridor, 3 feet in width, and four stub access roads 25 feet in width, comprising approximately 29,595 in aggregate square footage.

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
By: _____
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL–601
DATE: 8/15/06

FAA AIRSPACE REVIEW NUMBER: 2004–AAL–166–NRA

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____
HARVEY M. DOUTHIT, P.E. DESIGN SECTION CHIEF

APPROVED: Morgan P. Merritt
MORGAN P. MERRITT, P.E. PROJECT MANAGER

DATE JULY 2005
DESIGN DB/MB/MH
DRAWN MH
CHECKED ZWS

KING COVE AIRPORT

AIRPORT PROPERTY MAP

SHEET 9 OF 10

FILE:

DRAWING NAME: i:\764000\Dwgs\C\ALP\ALP09.dwg PLOTTED: Jul 29, 2005 – 10:13am

A. Purpose

This narrative report is included with the Airport Layout Plan (ALP) for King Cove Airport (KVC), located in King Cove, Alaska, in accordance with Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5300-13, Airport Design, Change 8, Appendix 7. The rationale for airport improvements is outlined in this narrative report.

B. Introduction

King Cove is a first class city located on the south side of the Alaska Peninsula. It lies 18 statute miles east of Cold Bay and 625 statute miles southwest of Anchorage. Access to King Cove is by air (typically from Cold Bay) and by water only. The community falls within the Aleutians East Borough and has approximately 794 year-round residents (2002 DCED Certified Population). The airport property is owned by the State of Alaska Department of Transportation and Public Facilities (DOT&PF). The DOT&PF contracts airport maintenance to the City of King Cove.

C. Airport Usage and Forecasts

1. Existing Usage

The FAA National Plan of Integrated Airport Systems (NPIAS) lists KVC as a commercial service non-primary (CM) airport. KVC is classified by the Alaska Aviation System Plan (AASP) as a Community Class Airport. A Community Airport is defined as an airport that is the primary land or water access point to small rural communities of at least 25 permanent year-round residents without other reliable year-round access.

PenAir provides the only scheduled passenger service to King Cove with scheduled flights daily from the Cold Bay airport. PenAir does not base any aircraft at KVC. They currently operate a Piper PA31-350 Navajo Chieftain, Piper PA32 Saratoga, and a Cessna 208B Caravan into KVC. Alaska Central Express report that it occasionally schedules flights to KVC using its Raytheon/Beech B1900C cargo aircraft. Occasional use by heavy cargo operators such as Everts, Northern and Lynden Air Cargo can be expected. This may consist of operations by MD DC-3, DC-6 and a Lockheed L-382 Hercules. There are no based aircraft at KVC.

2. Forecasted Usage

Table 1 provides a summary of projected aviation demand using an average annual growth rate (AAGR) of 2.3% (estimated from a linear regression model using census data from 1940 to 2000 obtained from the Alaska Department of Community and Economic Development) and includes passenger enplanements and aircraft operations. Operations were forecasted from 1992 data reported on the KVC FAA form 5010, Airport Master Record. Enplanements were forecasted from 2002 data obtained from PenAir.

Table 1

KVC PROJECTED AVIATION DEMAND

YEAR	PASSENGER ENPLANEMENTS	OPERATIONS		TOTAL OPERATIONS
		Itinerant Air Taxi	Itinerant GA	
2003	2,015	257	385	642
2008	2,258	288	432	719
2013	2,530	322	484	806
2023	3,176	605	607	1,012

The design aircraft for KVC are the Cessna 208B Caravan and the PA31-350 Navajo Chieftain, which are used by PenAir for air taxi service. Alaska Central Express has suggested in correspondence with the DOT&PF that it would schedule cargo flights to KVC using their Raytheon Beechcraft 1900-C cargo planes. Although KVC is primarily a utility airport based on the design aircraft, it has been disigned to other than utility standards to safely accommodate existing and anticipated use by larger cargo aircraft. Table 2 lists the design aircraft and typical aircraft data.

Table 2

DESIGN AIRCRAFT AND TYPICAL AIRCRAFT

AIRCRAFT	APPROACH SPEED	WINGSPAN	MAX. TAKE-OFF WEIGHT	AIRPORT REFERENCE CODE
CESSNA 208B*	LESS THAN 91 KNOTS	52 FEET	8,750 LBS	A-II
PA31-350 NAVAJO*	MORE THAN 91 BUT LESS THAN 121	32 TO 40 FEET	7,800 LBS	B-I
PA32 SARATOGA			3,600 LBS	B-I
RATHEON/BEECHCRAFT B1900-C		55 FEET	17,000 LBS	B-II

*Design Aircraft

D. Design Rational

1. Airport Reference Code

The airport reference code (ARC) for KVC is B-II, based on the combination of the Piper Navajo Chieftain approach speed of 100 knots (Aircraft Approach Category B) and the Cessna Caravan wingspan of 52 feet (Airplane Design Group II).

Table 3 summarizes the design standards for KVC.

Table 3

AIRPORT DESIGN STANDARDS (ARC B-II)

AIRPORT FEATURE	RUNWAY 7-25 (EXISTING)	STANDARD	RUNWAY 7-25 (ULTIMATE)
RUNWAY LENGTH	3,500 ft	3,500 ft	3,500 ft
RUNWAY WIDTH	115 ft	75 ft	100 ft
RUNWAY SAFETY AREA WIDTH	120 ft*	150 ft	150 ft
RSA LENGTH BEYOND R/W THRESHOLD	240 ft	300 ft	300 ft
ROFZ WIDTH	250 ft*	400 ft	400 ft
ROFZ LENGTH BEYOND R/W THRESHOLD	200 ft	200 ft	200 ft
RUNWAY OFA WIDTH	500 ft	500 ft	500 ft
RUNWAY OFA LENGTH BEYOND R/W THRESHOLD	240 ft	300 ft	300 ft
TAXIWAY WIDTH	70 ft	35 ft	50 ft
TAXIWAY SAFETY AREA WIDTH	70 ft*	79 ft	118 ft
TAXIWAY OFA WIDTH	131 ft	131 ft	186 ft

*Nonstandard Per FAA AC150/5300-13, Airport Design

Although the ARC is B-II, future dimensions of runway width, taxiway width, taxiway safety area width, taxiway object free area width, and RPZ extents are increased to C-III standards to support operations of larger cargo aircraft.

2. Airport and Terminal NAVAIDs

There are no existing instrumentation or lighting navigational aid (NAVAID) systems at the airport. KVC is a non-towered airport. Aircraft flying in the vicinity of the airport fly under visual flight rules (VFR) conditions. Services provided for the airport by the Cold Bay Flight Service Station (FSS) include radio contacts and airport advisories. Proposed NAVAID projects involve constructing pads for the installation of Precision Approach Path Indicators (PAPIs), installing medium intensity airfield lighting with Runway End Identifier Lights (REILs), installing a new airport beacon, and installing two new lighted wind cones, one with a panel-type segmented circle. The FAA installed an automated weather observation system (AWOS) in 2004.

3. Apron and Terminal Area Facilities

KVC currently has a main gravel apron and a basic unheated passenger shelter. Future improvements include expanding the existing apron, constructing a new 2-bay snow removal equipment building (SREB) and leaving the project field office in place to serve as a heated passenger building.

4. Runway

The runway length will remain at 3,500 to accomodate flights by fully-loaded design aircraft and anticipated cargo aircraft.

The runway width will be established to 100'. The additional width above the standard of 75' will improve runway wind coverage and support operations by larger cargo aircraft. A turnaround will be constructed at each runway end to facilitate turning movements of larger aircraft and to minimize runway surface damage caused by turning aircraft.

5. Runway Safety Areas

The existing runway safety area (RSA) is 4,000 feet long by 120 feet wide. Based on the current runway dimensions as shown in the United States Government Flight Information Publication, Alaska Supplement, the RSA is 310 feet beyond each end of the runway. The threshold markers at the airport indicate the runway length is 3,500' with the RSA 240' beyond the end of the runway. Extending the RSA to 4,100 feet will provide the required RSA length beyond both runway ends. The runway will be shifted to the north with new embankment added along the north edge of the existing embankment to increase the RSA width from 120 feet to the required 150 feet.

6. Pavements

The runway and all other airport traffic areas at KVC are unpaved with minimal surface course remaining. Consequently, the operational area surfaces deteriorate because of freeze-thaw cycles and wet weather. The airport is occasionally closed to air traffic for extended periods of time, particularly in the spring, when the runway surface becomes too soft to safely support aircraft operations. The runway and taxiway will be constructed with a minimum of 12 inches of crushed aggregate surface course while the apron operational areas and shoulders will be constructed with a minimum of 9 inches of crushed aggregate surface course to maximize operational safety by providing a durable surface. The SREB pad, passenger building pad, and airport access road will also be resurfaced.

7. Taxiways

Currently, KVC has one main taxiway connecting the runway with the apron. According to the FAA Airport Design AC, the taxiway width should be 35' and the taxiway safety area width should be 79 feet for Design Group II aircraft. The unpaved width of the existing taxiway and taxiway safety area is 70 feet. This taxiway will be reconstructed to Design Group III standards (50-foot-wide taxiway with 118-foot-wide taxiway safety area) to support occasional operations by larger cargo aircraft.

8. GA Requirements

No tiedown spots are currently available on the existing apron. Two new tiedown spots will be installed in the northwest quadrant of the apron.

9. Security Fencing

KVC does not have a fenced airport security perimeter. Wildlife incursions onto the runway are frequent, endangering operating aircraft. Unauthorized vehicles drive onto the airport endangering aircraft and damaging the runway. Unauthorized visitors vandalize equipment and facilites. Future improvements will add infrastructure subject to damage by wildlife and by those not authorized to be on the airport. To minimize incursions and vandalism, future improvements will include partial security fencing around the portion of the airport most easily accessed by unauthorized visitors.

10. Non-Standard Conditions

There are no non-standard conditions within the future airport.

E. Staged Development

Development at KVC will occur in two phases (scheduled construction – FY 2005 and 2006). The proposed improvements are described in this narrative and shown on the ALP. The estimated Federal and State funding amounts are presented in Table 4.

Table 4

AIRPORT DEVELOPMENT COST ESTIMATES

AIRPORT COMPONENT	TOTAL PROJECT COST	*FEDERAL FUNDING	*STATE FUNDING
PART 77 OBSTRUCTION REMOVAL	$420,000	$399,000	$21,000
RSA EXPANSION AND AIRPORT PAVING	$4,611,000	$4,380,450	$230,550
AIRPORT LIGHTING AND NAVIGATIONAL AIDS	$376,000	$357,200	$18,800
SREB	$994,000	$944,300	$49,700
PASSENGER WAITING BUILDING	$92,000	$87,400	$4,600
SECURITY FENCING	$218,500	$207,575	$10,925
TOTALS	$6,711,500	$6,375,925	$335,575

*BASED ON MAXIMUM ELIGIBILITY PERCENTAGE

F. Property Status

The existing airport property is divided into two tracts. Tract I is 142 acres and owned by the State of Alaska. Tract II is 30 acres and an avigation & hazard easement granted by the Aleut Corporation to the State of Alaska. Land surrounding the airport property is owned by the Aleut Corporation and compatible with airport operations. A material site has been developed outside airport property limits, north of the existing taxiway and runway intersection.

Four 150'x100' lease lots will be provided along the south edge of the future apron. The existing lease lots will be abandoned.

G. Noise

Because the airport is located 4 miles from the City of King Cove, noise has not been identified as an area of concern at KVC.

H. Non-Standard Conditions

The current width of the RSA and TSA are non-standard conditions for ARC B-II requirements. The current RSA width is 120 feet and the TSA is 70 feet. These deficiencies will be corrected with the proposed airport improvement project.

I. Part 77 Encroachments

The FAR Part 77 category will be changed from Utility-VFR to Other-Than-Utility-NPI, thereby increasing the width of the primary surface from 250' to 500'.

Mountainous terrain to the north and south of KVC penetrates the horizontal and conical surfaces by over 1000 feet as defined by 14 CFR Part 77, Subpart C. Removal of these terrain obstructions is not feasible. The rolling terrain along both sides of the runway penetrates both the primary and transitional surfaces for the existing and future airport configurations. These penetrations will be removed during construction of the future airport. Any brush identified as obstruction or potential obstructions will be cleared.

J. Community Involvement

Two community meetings were held in King Cove on September 24, 2003 and February 1, 2005. The community supports the airport improvements project.

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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL

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ALASKAN REGION, AAL-601

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APPROVED: Morgan P. Merritt
MORGAN P. MERRITT, P.E. — PROJECT MANAGER

DATE JULY 2005
DESIGN EJG/JGL
DRAWN SMT
CHECKED ZWS

KING COVE AIRPORT

NARRATIVE REPORT

SHEET 10 OF 10